

For all types of modern roofing construction...

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# Rising & Nelson

*natural colored*

**VERMONT**  
*roofing* **SLATE**

Dutch Village, Albany, N. Y.



**RISING & NELSON SLATE CO., INC. • WEST PAWLET, VERMONT**



## introduction

Investigation has shown that the cost of the roof of any structure ought to bear a certain definite relation to the cost of the entire building—not only from the standpoint of protection, but also from appearance. Every permanent building should be roofed with a material which will give it lasting protection, and at the same time be in character with the house and its surroundings itself. Because it does possess these qualities, for centuries slate has been the criterion by which other roof coverings have been judged. A slate roof has that indefinable quality which distinguishes any object of real value. And, at the same time, completes the picture of a well constructed building or home.

## advantages

- |                                  |                      |
|----------------------------------|----------------------|
| ● non-combustible-fireproof      |                      |
| ● wide range of effects possible |                      |
| appearance                       | thickness            |
| color                            | roof texture         |
| ● little or no maintenance cost  | ● waterproof         |
| ● resists climatic changes       | ● high salvage value |
| ● increases property values      | ● natural stone      |
| ● reduces insurance premiums     | ● permanence         |

## characteristics

The principal difference between slate and other stones is the natural slaty cleavage of the former which permits it to be more easily split in one direction than in the other. Slate quarried for roofing stock is of dense sound rock, exceedingly tough and durable. In the manufacturing of slate, nothing is added to or taken away from the natural stone. It is cut and trimmed mostly by hand labor into the most economical size and desired thickness. A slate roof is really a custom-made job, its ownership gives a feeling of pride and security.

## application data

The orthodox method of application provides a double head lap of 3", the exposure being determined by deducting the lap (3") from the length of the slate and dividing the difference by 2. Thus a slate 18" in length should show an exposure of 7½" and undereave slate 11" long. The length of the eave slate is found by adding not less than 3" to the exposure of the regular slate.

The slate as quarried in the Rising & Nelson quarries, being a permanent roofing material should be properly applied by competent and reliable workmen, the most important detail being the maintenance of the 3" head lap throughout.

Standard thickness slate weighs only about seven pounds to the square foot of roof surface.

Any roof construction conforming to good engineering practice and suitable for other roofing material is adequate for standard slate. This fact should be fully recognized in the interest of truth, economy and conservation. The weight of the roof covering is an insignificant factor when compared with the combined weights of rafters, sheathing, snow, etc., and the water saturation of artificial roofing materials. Research conducted by the National Slate Association fully established the fact that any building strong enough for other types of roofing material is equally sufficient for standard thickness slate.





## color

**Semi-weathering Green and Gray:** Frequently called Sea Green, it is the basic product of Rising & Nelson quarries and most widely known and used. Grayish green when first quarried, upon exposure to elements a percentage change to soft tones of buff and brown; the remainder retaining initial color. This gradual change serves to beautify the roof and in no way affects the durability of the slate. Interspersed in a mixed color roof, this slate will eliminate sharp contrasts and improve the blend immeasurably.

**Variegated Purple:** In this slate from Rising & Nelson quarries, the purple color predominates, part being clear purple, but some with green spots and shadings. Makes a handsome roof at a moderate price. Any thickness or gradation from 3/16" up.

**Unfading Mottled Green and Purple:** Consists of slightly varying shades of purple; some almost clear but usually mottled with green; others with green background mottled with purple. All blend in a soft and harmonious effect.

**Mottled Gray Black:** Vary in shade from clear light gray to tones of dark gray, created by dark stripes or streaks, some running vertically, others crosswise of the individual slates.

**Unfading Green:** One of the strong, fast colors. The shades vary somewhat from a light green to a dark emerald color.

All roofing slate described is guaranteed Grade A slate conforming to FEDERAL SPECIFICATION SS-S-451.

## sizes

The foregoing colors can be furnished singly or in any desired percentage of each. Except as otherwise indicated, the average standard thickness is 3/16" for commercial types with smooth texture. Rough texture slates are available in intermingled thicknesses from 3/16" to 3/8".

A "square" is the standard measurement and is the number of pieces of any size required to cover one hundred square feet of roof surface, not including waste in cutting for hips, valleys, dormers, etc. For very steep roofs or siding where a 2" double head lap is sufficient, fewer slates are needed.

Many slates are being applied over artificial roofings which have succumbed to the ravages of time and the elements, thus converting semi-permanency into permanent roof protection.

The standard lengths are 24", 22", 18", 16", 14", 12", 10". For some years, architects have continued to favor the use of one length and random widths or graduated lengths and random widths. This avoids the multiplicity of uniform rectangular exposures and improves perspective. Any of the designated colors can be furnished in these thicknesses and estimated weights per square — 3/16" 700 to 800 lbs.; 1/4" 950; 3/8" 1400; 1/2" 1800; 3/4" 2500; 1" 3400.

## specifications

### (1) General and Guarantee

(a) The General Conditions of the contract are hereby made a part of the contract and the roofing contractor shall examine these General Conditions and thoroughly acquaint himself with all the requirements therein contained.

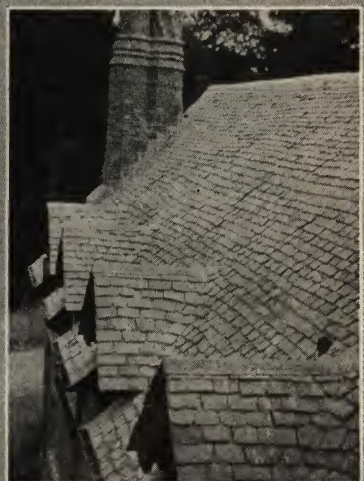
(b) This contractor shall furnish all materials and labor in accordance with the drawings and these specifications.

(c) This contractor shall inspect all surfaces prepared for slating by other trades, point out to the proper authorities all defects, and shall not proceed with the laying of slate, felt or flashings until corrections have been made.

(d) Roofing shall be applied by workmen experienced in the applying of slate.

(e) The roofing contractor shall furnish his own scaffold or rigging, or arrange with the general contractor for the use of scaffolds furnished by others.

(f) A written guarantee shall be furnished that the materials used are in strict accordance with these specifications, and that any and all repairs required on the roof due to defective materials or workmanship furnished under this contract shall be made without cost to the owner for a period of one year.





# specifications *continued*

## (2) Roofing Felt —

(a) On all boarding to be covered with slate, furnish and lay asphalt saturated rag felt, not less in weight than that commercially known as "30-lb." felt. In this weight, per 100 sq. ft., a tolerance of 1 lb. plus or minus will be allowed.

(b) Felt shall be laid in horizontal layers with joints lapped toward eaves and at ends at least 2" and well secured along laps and at ends as necessary to properly hold the felt in place and protect the structure until covered by the slate. All felt shall be preserved unbroken, tight and whole.

(c) The felt shall lap over all hips and ridges.

(d) Felt shall be lapped 2" over the metal of any valleys or built-in gutters.

## (3) Slate —

All slate shall be hard, dense, sound rock, machine punched for two nails each. All exposed corners shall be practically full. No broken corners on covered ends which sacrifice nailing strength or the laying of a watertight roof will be allowed. No broken or cracked slates shall be used.

**For Standard Thickness Roofing Slate** (a) Slate shall be of commercial standard thickness, Grade A, as furnished by Rising & Nelson Slate Company.

(b) State whether one standard length or graduated lengths and random widths.

(c) State whether one color, or the percentage of each color required.

(d) A certificate shall be furnished the roofing contractor by the quarrier certifying that the roofing slate furnished are in accordance with these specifications and/or approved layout.

**For Graduated Slate Roof** (a) Slate shall be Grade A as furnished by Rising & Nelson Slate Company, machine punched for two holes, and varying in thickness from ..... " at eave to ..... " at ridge; the percentage of each thickness to be respectively ..... The thicknesses shall be intermingled in the various courses, modulating from the heavier and thicker slates in the lower courses of the roof to the thinner slates at the ridge in such a way and manner as will develop the best architectural effect. A detailed roof layout for the application of the slate shall be furnished by the quarriers and approved by the architect before material is fabricated.

(b) All slate shall be in standard random widths graduated in length from ..... " at eave to ..... " at ridge, applied with standard 3" lap and exposures. Add paragraphs (c) and (d) as listed under "Standard Thickness" specifications.

## Natural Colored Slate Flagstone

Furnished in irregular and rectangular shapes in substantially the same colors, separately or collectively, as indicated for roofing slate. Most popular types is designated as "full range of colors including percentage of Red." The irregular units are by far the most popular. Range about 1 to 4 square feet in area; 3/4" to 1" thick — natural surfaces. Weight about 12 pounds per square foot. Sold by the "square" of 100 square feet. Random rectangles also furnished; with machine trimmed edges. Can be laid out and diagrammed by quarrier for specified areas when required.

## (4) Hips —

(a) All hips shall be to form "saddle" hips without metal underneath. (Specify "Boston" or "Mitered" Hips if preferred.)

## (5) Ridges —

(a) All ridges shall be laid to form "saddle" ridges. The nails of the combing slate shall pass through the joints of the slates below.

## (6) Valleys —

(a) All valleys shall be laid to form "open" valleys.

## (7) Elastic Cement —

(a) Cement shall be an approved brand of waterproof elastic slaters' cement colored to match as nearly as possible the general color of the slate.

## (8) Nails —

(a) All slate shall be fastened with two large-head slaters' solid copper nails. Use 3d (1 1/4") nails for slates 18" or less in length, 4d (1 1/2") for 20" or longer, and 6d (2") for slates on hips and ridges.

## (9) Slating —

(a) The entire surface of all main and porch roofs, the roofs and sides of any dormer window, if shown, and all other surfaces so indicated on the drawings, shall be covered with slate in a proper and watertight manner.

(b) The slate shall project 2" at the eaves and 1" at all gable ends, and shall be laid in horizontal courses with the standard 3" head lap, and each course shall break joints with the preceding one. Slates at the eaves or cornice line shall be doubled and canted 1/4" by a wooden cant strip.

(c) Slates overlapping sheet metal work shall have the nails so placed as to avoid puncturing the sheet metal. Exposed nails shall be permissible only in top courses where unavoidable.

(d) Neatly fit slate around any pipes, ventilators, etc.

(e) Nails shall not be driven in so far as to produce a strain on the slate.

(f) Cover all exposed nailheads with elastic cement spread thickly over exposed surface of undercourses of slate, nailed securely in place and pointed with elastic cement.

(g) Build in and place all flashing pieces furnished by the sheet metal contractor and co-operate with him in doing the work of the flashing.

(h) On completion all slate must be sound, whole and clean, and the roof shall be left in every respect tight and a neat example of workmanship.



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